

December 19, 2018

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VIA EMAIL
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Subject: Status Report for the Oak Woodland Habitat Revegetation/Mitigation Program for the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project, Los Angeles County, California

Dear Ms. Lee:

This status report provides a summary of Fall/Winter 2018 site conditions for the Los Angeles County Public Works' (Public Works') 2014 *Oak Woodland Habitat Revegetation/Mitigation Program for the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project* (OWHRMP). The OWHRMP describes the creation of 5.5 acres of oak woodland habitat and 2.5 acres of sage scrub habitat as compensation for impacts associated with the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project. The mitigation site locations are shown in Exhibits 1, 2, and 3, and site photographs are provided in Attachment A.

SUPPLEMENTAL PLANTING AND SEEDING – FALL/WINTER 2018

Psomas and its subcontractor S&S Seeds, Inc. collected cuttings (pads) of Vasey's prickly-pear (*Opuntia x vaseyi*) from the Middle Sediment Placement Site (SPS) in March 2018 and Psomas installed these materials on the Lower SPS in fall/winter 2018. Psomas hand-broadcasted a total of 3.0 pounds of locally collected seed of spectacular beardtongue (*Penstemon spectabilis*) on slopes of the Lower SPS in November 2018 (prior to seasonal rains), and Psomas planted approximately 2.0 pounds of locally collected Engelmann oak acorns [*Quercus engelmannii*] on the mitigation site in December 2018. The Engelmann oak acorns were obtained from public rights-of-way in developed areas in the local subwatershed (i.e., from roadway gutters) when observed beneath massive 'heritage' trees of this species (i.e., specimens assumed to be naturally occurring).

MITIGATION MAINTENANCE AND MONITORING

The Restoration Contractor (Nakae & Associates, Inc.) (Nakae) promptly treats or removes non-native plant species when observed during regular maintenance activities. To the extent practicable, weeds are removed prior to seed production/dispersal to avoid re-infestation of the site. Herbicide use is minimized in favor of hand-pulling of weeds whenever possible. Nakae also performs regular maintenance of the concrete drainages and inlets on the Lower SPS, the exclusionary fencing on the deck of the Lower SPS, and the wildlife 'drinker' tanks that were placed at the northeast corner of the site. Nakae initiated maintenance of an additional Weed Abatement Buffer Area (Buffer Area 5; 0.37 acre) that is adjacent to the Lower SPS in September 2018.

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Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project

As of December 18, 2018, Public Works' website indicated that a total of 6.14 inches of precipitation was recorded (via gauge data) at Santa Anita Dam between October 1, 2018, and December 18, 2018. The normal seasonal total of precipitation at Santa Anita Dam is 26.21 inches for the period of October 1 to September 30. The precipitation gauge at Santa Anita Dam (approximately 1,400 feet elevation) would be expected to record substantially more precipitation than occurs at the project site (approx. 650 feet elevation). Supplemental irrigation was suspended on the oak woodland (SPS deck) mitigation site from October 2016 to February 2018; however, due to acute/prolonged drought conditions, operation of the bubbler system (only) was resumed with Public Works' approval on February 28, 2018. With the recent onset of seasonal rains, bubbler irrigation was discontinued (again) in October 2018. Irrigation has not been applied to the sage scrub planting areas (SPS slopes) since June 9, 2015. The use of irrigation will be phased-out as soon as possible (based on year-to-year weather conditions) to foster adaptation of native plant species to the typical arid growing conditions in this region.

The Biological Monitor coordinates with Nakae on the identification of native/non-native plant species and methods of weed removal. The Biological Monitor also notes all wildlife species observed on the site and ensures that maintenance activities do not adversely impact sensitive biological resources.

MITIGATION PERFORMANCE

The mitigation site supports an excellent diversity of plant and animal species and continues to develop vegetation structure/cover. The mitigation site exceeded several of the year seven- to year-ten vegetative performance criteria, as measured during the third annual survey that was performed in spring 2018. As of July 2018, a total of 142 native plant species have been observed on the site, including trees, shrubs, sub-shrubs, vines, succulents, herbs, grasses, ferns, spike-moss, and emergent plant species. A total of 104 native vertebrate wildlife species (85 native bird species) have been observed on the site, in addition to numerous native invertebrate species (e.g., butterflies, beetles, bees, dragonflies) since project initiation in September 2013. The planted oaks exhibit excellent growth and survival, and there is a diverse mosaic of associated understory vegetation. Many of the oak saplings now exceed ten feet in height. The placed substrate enhancements (natural snags, coarse woody debris, brush piles, boulder assemblages) provide valuable cover for wildlife species and habitat niches for the establishment of a variety of plant species (e.g., ferns).

Several 'camera traps' (motion-activated video cameras) were installed on and adjacent to the mitigation site to provide enhanced, 24-hour wildlife observation data. Wildlife species—including coyote (*Canis latrans*), bobcat (*Lynx rufus*), southern mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), common gray fox (*Urocyon cinereoargenteus*), and black bear (*Ursus americanus*)—have been observed via camera traps.

The fourth annual quantitative survey of the mitigation site is expected to be performed in April/May 2019, and the associated fourth annual monitoring report will be completed in spring/summer 2019. The California Department of Fish and Wildlife (CDFW) has authorized Public Works to discontinue the requirement for surveys of the reference site for the duration of the mitigation program. Qualitative and quantitative monitoring will continue through Years 7 to 10 until the mitigation program has been signed off by the CDFW and the City of Arcadia.

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Please call Richard Lewis at (626) 351-2000 with any questions regarding this report.

Sincerely,

P S O M A S



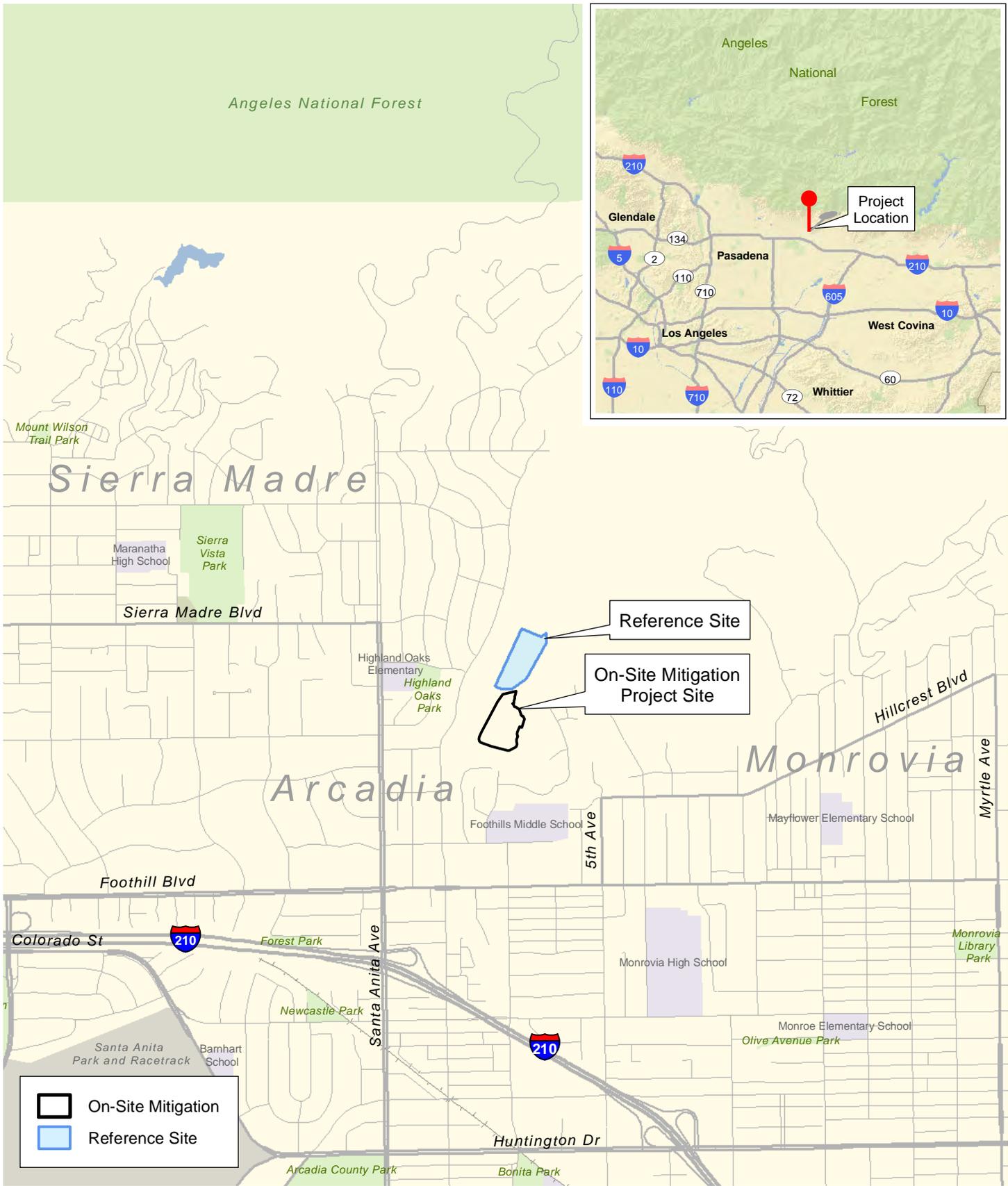
Melissa A. Howe
Vice President, Resource Management



Richard B. Lewis, III, ENV SP
Senior Project Manager

Enclosures: Exhibit 1 – Project Vicinity
 Exhibit 2 – Sediment Placement Site Locations
 Exhibit 3 – Mitigation Site Location (Lower Sediment Placement Site)
 Attachment A – Site Photographs

cc: Crystal Franco (CFranco@dpw.lacounty.gov)
 Marc Blain, Psomas
 Jim Hunter, Psomas

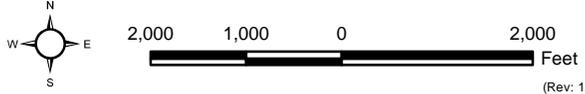


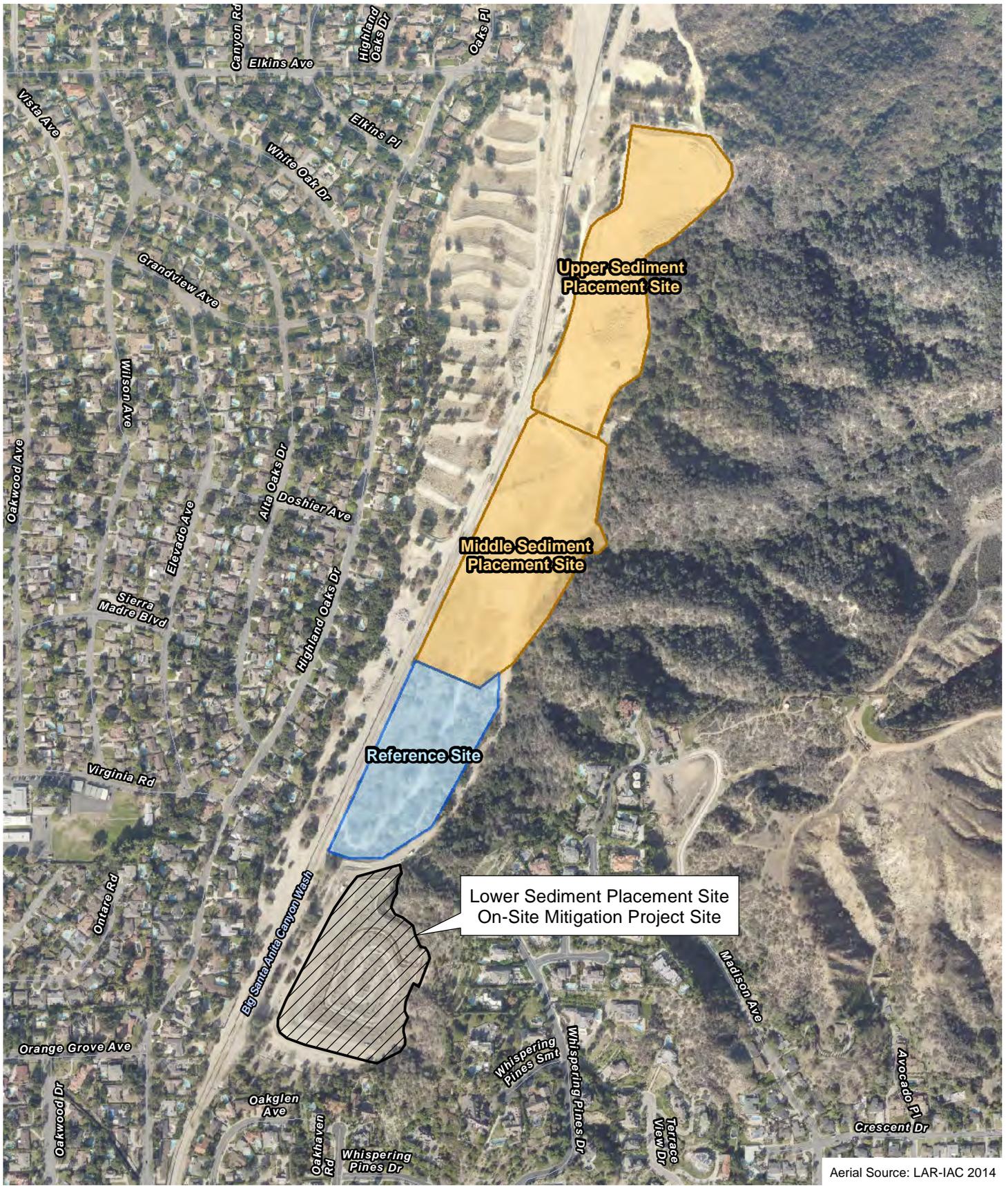
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Project Vicinity

Exhibit 1

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program;
 Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project



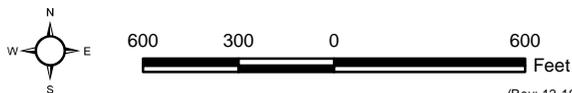


Aerial Source: LAR-IAC 2014

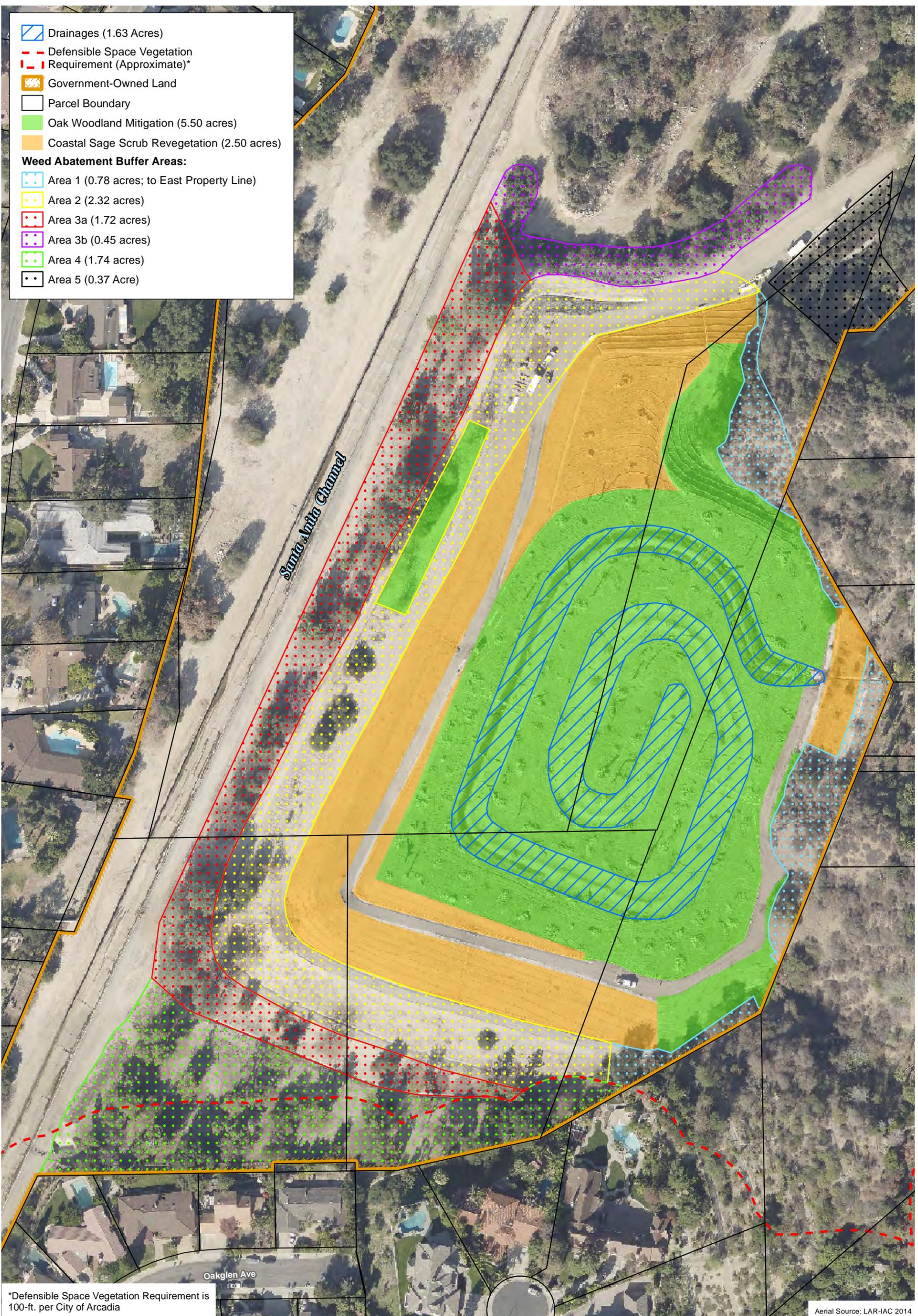
Sediment Placement Site Locations

Exhibit 2

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program;
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-  Drainages (1.63 Acres)
-  Defensible Space Vegetation Requirement (Approximate)*
-  Government-Owned Land
-  Parcel Boundary
-  Oak Woodland Mitigation (5.50 acres)
-  Coastal Sage Scrub Revegetation (2.50 acres)
- Weed Abatement Buffer Areas:**
-  Area 1 (0.78 acres; to East Property Line)
-  Area 2 (2.32 acres)
-  Area 3a (1.72 acres)
-  Area 3b (0.45 acres)
-  Area 4 (1.74 acres)
-  Area 5 (0.37 Acre)



*Defensible Space Vegetation Requirement is 100-ft. per City of Arcadia

Aerial Source: LAR-IAC 2014

Mitigation Site Location (Lower Sediment Placement Site)

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Exhibit 3



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ATTACHMENT A
SITE PHOTOGRAPHS



November 2018. View from north to south of the oak woodland mitigation site on the Lower Sediment Placement Site (SPS).



December 2018. Robust growth and healthy condition of planted coast live oak saplings, growing amid native shrubs and perennials that still exhibit drought-dormancy.



December 2018. There is dense growth of native riparian vegetation along portions of the dual, spiraling drainages that traverse the oak woodland mitigation site.



December 2018. New seedlings of distant phacelia, a re-propagating seed mix species, have emerged in response to recent rains.



December 2018. The coastal sage scrub mitigation site includes areas that were planted with spiniferous species (cactus and yucca) to improve vegetative diversity.



December 2018. Native vegetation is becoming increasingly abundant in the Weed Abatement Buffer Areas that Public Works voluntarily maintains and enhances on the Lower SPS.

Site Photographs

*Status Report: Oak Woodland Habitat Revegetation/Mitigation Program
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Attachment A

